

AMENDMENTS TO THE CLAIMS

Claims 1-12 (canceled)

Claim 13 (currently amended): An illuminating and irradiating unit for ophthalmic instruments, comprising:

an illumination source;

means for generating specific illumination patterns and/or profiles; and

means for coupling light from the illumination source into the parallel beam path of the observation system of the ophthalmic instrument;

wherein optical filters, diaphragms, and/or optoelectronic light modulators with a control unit are used as the means for generating specific illumination patterns and/or profiles.

Claim 14 (currently amended): The illuminating and irradiating unit according to ~~claim 13~~ which has, in addition, Claim 13, further comprising:

a monitoring unit for monitoring the radiation dose, for recording the irradiation patterns, and for registering the irradiated positions.

Claim 15 (currently amended): The illuminating and irradiating unit according to ~~claim 13,~~ Claim 13;

wherein the monitoring unit has one or more interfaces for transferring data.

Claim 16 (currently amended): The illuminating and irradiating unit according to ~~claim 13,~~ Claim 13;

wherein the illumination source generates narrow-band light in the short-wavelength range.

Claim 17 (currently amended): The illuminating and irradiating unit according to ~~claim 16~~,
Claim 16;

wherein the illumination source generates narrow-band light around 365 nm.

Claim 18 (currently amended): The illuminating and irradiating unit according to ~~claim 13~~,
Claim 13;

wherein the illumination source generates narrow-band light in the long-wavelength range.

Claim 19 (currently amended): The illuminating and irradiating unit according to ~~claim 18~~,
Claim 18;

wherein the illumination source generates narrow-band light around 690 nm.

Claim 20 (canceled)

Claim 21 (currently amended): The illuminating and irradiating unit according to ~~claim 13~~,
Claim 13;

wherein a beamsplitter which is used for coupling in light from the illumination source
simultaneously serves as a blocking filter to protect the observer from excessive levels of
irradiation by the illumination light.

Claim 22 (currently amended): The illuminating and irradiating unit according to ~~claim 13~~,
Claim 13;

wherein the illumination source is not arranged within the illumination unit but rather as a
separate structural component part and is connected to the means for generating specific
illumination patterns and/or profiles by means of a light guide.

Claim 23 (currently amended): The illuminating and irradiating unit according to ~~claim 13~~,
Claim 13;

wherein an eyetracker unit is provided in addition for monitoring the orientation of the
illumination patterns on the areas to be irradiated during irradiation and/or for tracking.

Claim 24 (currently amended): The illuminating and irradiating unit according to ~~claim 13~~,
Claim 13;

which is conceived as a modular unit for retrofit installation in the parallel beam path of an
ophthalmic instrument.

Claim 25 (currently amended): The illuminating and irradiating unit according to ~~claim 13~~,
Claim 13;

which can be used in combination with subassemblies such as a wavefront measuring unit
and/or a topography system and/or an eye axis length measurement device for different
ophthalmic instruments.

Claim 26 (currently amended): The illuminating and irradiating unit according to ~~claim 13~~,
Claim 13;

which can be arranged in a shared housing with other subassemblies such as a wavefront
measuring unit and/or a topography system and/or an eye axis length measuring device.

Claim 27 (new): The illuminating and irradiating unit according to Claim 13;
wherein the optoelectronic light modulator is a reflecting microdisplay, for example a digital
micromirror device ("DMD") or a liquid crystal on silicon ("LCOS").

Claim 28 (new): The illuminating and irradiating unit according to Claim 13;

wherein the optoelectronic light modulator is a transmissive microdisplay, for example a liquid crystal display ("LCD").

Claim 29 (new): The illuminating and irradiating unit according to Claim 13;
wherein the optoelectronic light modulator is a self-luminous microdisplay, for example a light emitting diode ("LED") or an organic light emitting diode ("OLED").